ABSTRACT

A method for screening neural system defects in a human comprises: (A) providing chromosomal material from the human; (B) detecting a modification of the *NAP1L2* gene in the chromosomal material, wherein the modification is selected from a) substitution, b) deletion, c) frame-shift, or d) insertion that causes a loss of biological function in the *NAP1L2* gene; and (C) correlating the modification of the gene with a potential for a neural system defect. The method can also be practiced with the mouse *Nap1l2* gene.